Canadian Grain Commission

Annual Report 1986

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February 1, 1987

The Honourable Charles Mayer
Minister of State (Canadian Wheat Board)
OTTAWA, Ontario

Sir:

Pursuant to Section 14 of the Canada Grain Act, the 1986 Annual Report of the Canadian Grain Commission is hereby submitted.

The document reviews the main activities undertaken by the Commission to regulate grain handling in Canada and establish and maintain standards of quality for Canadian grains and oilseeds. This report includes the Commission's revenue and expenditures for the fiscal year ending March 31, 1986 and provides information and statistics relating to the quality and volume of grain handled in the licensed elevator system during the 1985-86 crop year.

Respectfully,

G.G. Leith
Chief Commissioner

R.H. Klassen
Assistant Chief Commissioner

R.A. Groundwater
Commissioner

TABLE OF CONTENTS

		Page
Section I	Introduction	1
Section II	Production, Quality and Disposition of Grain	2
Section III	Canada Grain Act	5
	(A) Regulation of Grain Handling	5
	(B) Standards of Quality	8
Section IV	Administration	13
Section V	Special Acts and Other Responsibilities	15
	(A) Grain Futures Act	15
	(B) Inland Water Freight Rates Act	15
	(C) Western Grain Stabilization Act	15
	(D) Canadian International Grains Institute	15
Appendix A	Grain Statistics and Quality	16
Appendix B	List of Publications	30
Appendix C	Revenue and Expenditures	31
Appendix D	Organizational Chart	35

SECTION I

INTRODUCTION

Established in 1912 by the Canada Grain Act, the Canadian Grain Commission (formerly named the Board of Grain Commissioners) is responsible to the Minister of State (Canadian Wheat Board), who reports Commission activities to the Parliament of Canada. Pursuant to the Act, the Commission has two main activities: the regulation of grain handling in Canada, and the establishment and maintenance of standards of quality for Canadian grains and oilseeds. Operational costs are recovered almost entirely by the collection of fees for services performed.

Three Commissioners appointed by Governor-in-Council develop policy to meet the Commission's objectives.

Six Assistant Commissioners, also appointed by Governor-in-Council, deal with inquiries from producers and the grain trade. The four western Assistant Commissioners monitor the operations of licensed primary elevators and report their observations to the Commissioners.

The **Grain Appeal Tribunal** examines and rules upon appeals of grades assigned by a Commission inspector on the official inspection of a sample of grain.

The **Supervisor of the Commodity Exchange** supervises grain futures trading in Canada under the terms of the Grain Futures Act.

Operations of the Commission are headed by the **Executive Director,** who plans, co-ordinates and administers the activities of all divisions and assists in developing and implementing Commission policies.

There are four operating divisions:

The **Inspection Division** maintains quality control of Canadian grains and oilseeds as they move through the handling system. It officially inspects grain at licensed terminal and transfer elevators and supervises and controls the treatment of grain.

The **Weighing Division** supervises weighing of grain at licensed terminal and transfer elevators. It audits their physical stocks at regular intervals and investigates excessive overages and shortages in grain receipts or shipments.

The **Grain Research Laboratory Division** assesses the quality of new crops, monitors the quality of grain moving through the licensed elevator system to final market positions, conducts basic and applied research on Canadian grains and oilseeds, and supplies technical assistance to marketers of Canadian grains and oilseeds.

The **Economics and Statistics Division** provides documentation to terminal and transfer elevators, conducts economic studies for the Commission and publishes statistics. It issues grain dealer and elevator licences and monitors security provisions related to licensees. It administers the allocations of rail cars to producers who apply for this service.

The Canada Grain Act requires the Commission to establish the **Eastern and Western Grain Standards Committees,** which review and recommend new grades and grade changes, as well as examine and recommend primary and export standard samples.

Headquartered in Winnipeg, the Commission offers permanent on-site services at 18 centres across Canada and employs almost 800 people, including administrative and clerical personnel, scientists, statisticians, economists, grain inspectors and weighers and other specialists and technicians.

SECTION II

PRODUCTION, QUALITY AND DISPOSITION OF GRAIN

GRAIN SUPPLIES AND DISPOSITION

The 1985-86 crop year (August 1, 1985 to July 31, 1986) was characterized by an increase in crop production, producer deliveries, exports, and domestic grain use. Exports of major Canadian grains and oilseeds were higher by 5% than those of the 1984-85 crop year.

Total production of major grains in 1985 is estimated at 53.2 million tonnes by Statistics Canada*, up 14% from the final production figure for the previous year. The 1985 production included 22.3 million tonnes of wheat (excluding durum), 12.4 million tonnes of barley, 7.5 million tonnes of corn, 3.5 million tonnes of rapeseed, 3.0 million tonnes of oats, 2.0 million tonnes of durum wheat, 1.0 million tonnes of soybeans, 0.9 million tonnes of flaxseed, and 0.6 million tonnes of rye.

Producer deliveries into the licensed elevator system totalled 33.2 million tonnes for 1985-86, up almost 19% from the previous year. Domestic use increased about 6% from that of 1984-85.

Canadian exports of bulk grain, seed, and processed cereal grains for 1985-86 increased 5% to 24.5 million tonnes, as compared with the previous year's exports. The largest increases in export volumes of major grains occurred in barley (up 36%), flaxseed (up 13%) and wheat excluding durum (up 3%). Rapeseed exports remained similar to the 1984-85 figure. Decreases in exports were recorded for rye (35%), durum wheat (24%), and corn (12%).

The estimated total stocks of grain in store at the end of crop year rose to 16.1 million tonnes at July 31, 1986, an increase from stocks of 13.0 million tonnes a year earlier.

This report includes figures on grain production and handling for all of Canada which have been gathered from Statistics Canada and Canadian Grain Commission sources. Where only figures from western Canada are reported, no official statistics from eastern Canada are available.

GRAIN PRODUCTION, MARKETING AND QUALITY — 1985-86

Spring Wheats: Total Canadian production of all spring wheats was 20.6 million tonnes, of which 99% was produced in western Canada.

Red Spring Wheat: Western Canadian producers delivered to primary elevators 18.1 million tonnes of red spring wheat in the 1985-86 crop year, an increase of 17% from the 1984-85 level. The grade distribution of red spring wheat received at terminal elevators during the crop year was as follows: No. 1 Canada Western, 27%; No. 2 Canada Western, 24%; No. 3 Canada Western, 32%; No. 1 and No. 2 Canada Utility, 1%; and Canada Feed, 8%. This grade distribution refers to straight and tough grades. An additional 4% was tough utility, feed, or prairie spring, and 2% was straight Canada Prairie Spring.

*November estimate of production of principal field crops, Statistics Canada, December 3, 1986.

Exports of the top three grades of red spring wheat totalled 13.1 million tonnes (down 3% from last crop year), exports of No. 1 Canada Utility totalled 0.1 million tonnes (down 67%), and exports of Canada Feed wheat increased to 1.4 million from 0.2 million tonnes.

Soft White Spring Wheat: Western Canadian farmers delivered to primary elevators 0.4 million tonnes of soft white spring wheat in 1985-86.

Exports of soft white spring wheat totalled 0.3 million tonnes.

Amber Durum Wheat: Western producer deliveries of amber durum wheat totalled 1.7 million tonnes during the 1985-86 crop year. The grade distribution as received at terminal elevators during the year was as follows: No. 1 Canada Western, 32%; No. 2 Canada Western, 25%; No. 3 Canada Western, 28%; and No. 4 and No. 5 Canada Western, 14%. This grade distribution refers to straight and tough grades. Durum wheat exports totalled 1.4 million tonnes, a 24% decrease from last crop year. The Canadian production of 2.0 million tonnes of durum wheat in 1985 is nearly all from western Canada.

Winter Wheats: Canadian soft white and hard red winter wheat production was estimated by Statistics Canada at 1.7 million tonnes in 1985-86, an increase of 31% over the previous crop year. Fifty-seven percent of the winter wheat crop was produced in eastern Canada. Exports of hard red winter wheat in 1985-86 remained virtually unchanged from a year ago at 0.2 million tonnes.

Barley: Western Canadian producers delivered 6.5 million tonnes of barley in the 1985-86 crop year, an increase of 28% from 1984-85. The predominant grade entering into terminal elevators was No. 1 Feed. This grade represented 91% of total receipts (includes straight and tough No. 1 Feed). Exports of barley and its products rose to 3.8 million tonnes from the previous year's level of 2.8 million tonnes, an increase of 36%. Eighty-nine percent of the barley crop of 12.4 million tonnes was produced in western Canada.

Corn: Deliveries of corn into eastern transfer elevators totalled 0.7 million tonnes during the crop year. Export clearances of Canadian corn reached 0.5 million tonnes, a 12% decrease from last crop year. Statistics Canada estimated Canadian corn production at 7.5 million tonnes for the 1985-86 crop year, an increase of 7% over the 1984-85 crop year. Ninety-four percent of the grain corn was produced in eastern Canada.

Rapeseed: Producer deliveries of rapeseed in western Canada reached 3.0 million tonnes, an amount very similar to that of last crop year. Seventy-seven percent of rapeseed delivered to terminal elevators in 1985-86 graded No. 1 Canada. Exports totalled 1.5 million tonnes for both 1985-86 and 1984-85. Of the total Canadian production of 3.5 million tonnes of rapeseed in 1985-86, 98% was produced in western Canada. Ontario production rose from 21 thousand tonnes in 1984 to 84 thousand tonnes in 1985. This represents a 12-fold increase since 1983.

Oats: Western Canadian producers delivered 0.3 million tonnes of oats in the 1985-86 crop year, the same amount as was delivered during the 1984-85 crop year. Terminal elevator receipts included 3% No. 2 Canada Western, 12% Extra No. 1 Feed, 76% No. 1 Feed, 6% No. 2 Feed, and 2% No. 3 Feed (straight and tough grades). Exports of oats totalled 43 thousand tonnes, as compared to 18 thousand in the previous year. Of the 3.0 million tonnes of oats produced, 73% was grown in western Canada.

Soybeans: Producers delivered 0.2 million tonnes of soybeans into eastern transfer elevators. Soybean exports totalled 0.2 million tonnes during the crop year, an increase of 41% from the previous crop year. Production of soybeans in eastern Canada was

estimated by Statistics Canada at 1.0 million tonnes during the 1985-86 crop year, an 11% increase over the 1984-85 figure.

Flaxseed: Western Canadian producers delivered 0.7 million tonnes of flaxseed during the 1985-86 crop year, a 31% increase over 1984-85 deliveries. Ninety-seven percent of flaxseed delivered to terminal elevators graded No. 1 Canada Western. Flaxseed exports increased from the previous year to 0.6 million tonnes. Production of flaxseed totalled 0.9 million tonnes, all from western Canada.

Rye: Deliveries of western rye during the 1985-86 crop year totalled 0.3 million tonnes, virtually unchanged from the previous crop year. The grade distribution at terminal elevators for 1985-86 showed 75% No. 1 Canada, 19% No. 2 Canada and 5% No. 3 Canada. Rye exports decreased to 0.2 million tonnes, or about 65% of the export volume in 1984-85. Of the 0.6 million tonnes of Canadian rye produced in 1985, 85% was grown in western Canada.

ENVIRONMENTAL EFFECTS ON CROP PRODUCTION — (AUGUST 1, 1985 TO JULY 31, 1986)

Western Canada: The 1985 fall harvest was severely delayed by precipitation. Crop quality deteriorated while first rain, then widespread snow prevented combining. Warm, dry weather later in the fall allowed completion of harvesting in most of western Canada.

Overall growing conditions for 1986 crops were good, and many parts of western Canada reported near-record yields. Moisture conditions for fall-seeded crops were better than normal because of heavy rains in August, September and October of 1985. Heavy rains in April 1986 delayed spring seeding somewhat, but it resumed following hot, dry weather toward the end of May in eastern Saskatchewan and southern Manitoba.

Further west, seeding began in late April with excellent subsoil moisture supplies, prompting producers to expand the seeded acreage of spring wheat and amber durum wheat, particularly in the areas affected by drought in 1984 and 1985.

Ontario: The winter wheat crop planted in 1984 suffered very little winterkill, and favorable weather conditions during the summer of 1985 resulted in a record crop. The wheat was harvested under ideal conditions and quality was excellent.

Ontario also reported record yields of spring grains and oilseeds. Frequent showers during the fall of 1985 caused some minor harvest delays, but crop quality was not adversely affected.

Quebec: Growing conditions for the 1985 crop were good, and sufficient moisture was available. Warm, clear weather prevailed during the harvest; yields were excellent and quality was good.

Spring seeding of the principal Quebec crops of wheat, barley, oats and corn began in late April 1986 and continued under good conditions to the end of May.

Early in the growing season, a prolonged period of above-average precipitation and lack of adequate sunshine hindered the maturation of wheat, oats and barley, lowering both yields and quality.

Nova Scotia: Good weather conditions prevailed during the growing and harvesting season of the 1985 Nova Scotia grain crop. Both yield and quality were good.

The 1986 spring seeding of wheat, oats, barley, rye and corn was completed about May 15 under less than ideal conditions. The growing season suffered from excessive rainfall and below-average temperatures.

SECTION III

CANADA GRAIN ACT

The Act requires the Canadian Grain Commission to establish and maintain standards of quality for Canadian grain and to regulate grain handling in Canada, to ensure a dependable commodity for domestic and export markets.

(A) REGULATION OF GRAIN HANDLING

LICENSING

As of August 1, 1985 the Commission issued 2 076 licences, including 1 940 for primary elevators, 21 for terminal elevators, 25 for transfer elevators, 29 for process elevators and 61 grain dealer licences. Additional statistics on licences issued and storage capacity appear in Appendix A-2.

Security. To qualify for licensing, applicants must provide security acceptable to the Commission for the purpose of ensuring that obligations to holders of documents issued pursuant to the Canada Grain Act for the payment of money or delivery of grain will be met. Liabilities are monitored to determine the adequacy of security levels. Failure to provide adequate security can result in revocation of a licence.

In case of default, the Commission may realize the security held. During the 1985-86 crop year, the Commission realized the security tendered by Norstar Grain Company Ltd.; the security monies will be distributed after eligibility of claimants and the value of the claims is finalized. In addition, the eligible claims of Meridian Grain Ltd. were settled by the surety company involved. Finally, the Commission continues to hold the proceeds of security realized in 1984-85 after Agri Commodities Ltd. made an assignment in bankruptcy. These will be distributed after direction has been received from the courts.

DOCUMENTATION

Statistics. The Economics and Statistics Division is the principal Canadian source of statistics on grain that is handled by, moved through and stored at licensed facilities. These statistics are based on the official records and periodic reports submitted by licensees, as well as on the Commission's operations in licensed elevators. Corresponding data from the Canadian Wheat Board and from other organizations and associations are also taken into account.

Statistics are published on the volume of Canadian grain handled and stored within the elevator system, and moved to domestic and export markets. Distributed both in Canada and abroad, these reports are of value to the Commission's operations, the grain industry and other government departments.

The Division works in close co-operation with the Canadian Wheat Board, Statistics Canada's Agriculture Statistics and Natural Resources Division and other federal and provincial agencies. In addition to data exchanges, the Division provides statistical support to the Food and Agriculture Organization of the United Nations, the International Wheat Council and the United States Department of Agriculture.

Statistical and Economic Research. The Economics and Statistics Division continued to study grain-handling costs to assist the Commission in setting maximum tariffs for services performed in the elevators. The Division also undertook studies to assist

the Commission in its regulatory functions. Specific examples include a study of Commission fees, projections of future grain movement and a study of on-farm drying capacity. Division officers also participated in and provided support to industry-wide committees and study teams such as the Senior Grain Transportation Committee and its sub-committees.

Documentation Services. The Economics and Statistics Division provides documentation and reporting services for licensed terminal and transfer elevators. Selected information is electronically integrated into the accounting and inventory systems of other agencies and organizations of the industry. This material is used extensively by the Division to prepare statistical reports and by the grain industry in business activity and research studies.

Registration. Sections 95 and 96 of the Canada Grain Act provide for the registration and cancellation of elevator receipts by the Commission. Licensed terminal and transfer elevators must issue elevator receipts for all registered grain received. Similarly, when discharging grain, terminal and transfer elevators must surrender to the Commission for cancellation elevator receipts for the same kind, grade and quantity of grain as that which is discharged from the elevator.

Elevator receipts are registered and cancelled on the basis of official grade and weight records. A registered elevator receipt can be used as a negotiable document.

The Economics and Statistics Division offices in Winnipeg, Vancouver and Montréal control the registration and cancellation of elevator receipts. The Commission's inspection division office at Chatham, Ontario provides similar services to transfer elevators in southern Ontario on a request basis.

Durir.; the 1985-86 crop year, elevator receipts representing 25 063 124.471 tonnes of grain unloaded were registered, and elevator receipts representing 24 810 143.903 tonnes of grain shipped were cancelled in the Western Division.* In the Eastern Division, elevator receipts representing 15 368 950.423 tonnes of grain unloaded were registered, and elevator receipts representing 15 788 490.589 tonnes of grain shipped were cancelled.

PRIMARY ELEVATORS

Maximum Tariffs for Services. Maximum tariffs for grain handling and storage services were increased by approximately 3% on October 1, 1985. The new maximum tariffs for wheat were set at $8.53 per tonne for elevation and $0.026 per tonne per day for storage. Most companies continued to charge less than the maximum tariffs for elevation services. Maximum tariffs are listed in Appendix A-11.

Inspection of Licensed Primary Elevators. During 1985-86, the western Assistant Commissioners inspected 250 elevators in Manitoba, 316 in southern Saskatchewan, 238 in northern Saskatchewan and 221 in Alberta. Their inspections included checks on scales, sieves, moisture meters and other equipment. They also examined deductions for shrinkage, assessment of dockage, reports on contaminated grain, use of authorized forms, and posting of current Commission regulations applicable to primary elevators.

The Assistant Commissioners are authorized to deal directly with elevator managers and superintendents when investigating excessive overages or shortages. To determine whether there is an overage or shortage in receipts or shipments of grain,

*Under the Canada Grain Act, the Western Division includes Thunder Bay and all of Canada west of Thunder Bay. The Eastern Division includes all of Canada east of Thunder Bay.

the Commission requires that stocks of grain, grain products and screenings in store in licensed primary and process elevators be weighed periodically. The Commission reviews the details of the weighovers and, when necessary, holds discussions with company management.

Further activities of the six Assistant Commissioners are given at the end of Section III.

TERMINAL AND TRANSFER ELEVATORS

Maximum Tariffs for Services. The maximum allowable tariffs for grain handling and storage services were increased by approximately 3% as of October 1, 1985. At terminals, the new maximum elevation tariff for wheat was set at $5.01 per tonne. At transfer elevators the maximum tariff for receiving from a vessel and shipping to a vessel was set at $3.81 per tonne for wheat. The maximum storage rate for wheat in both sectors was set at $0.035 per tonne per day. All terminal elevator companies continued to charge less than the maximum tariffs for elevation, while transfer elevator companies generally charged the maximum rates established by the Commission for this service. Maximum tariff rates for all grains are listed in Appendix A-11.

Inspection of Equipment and Facilities. In licensed terminal and transfer elevators, all samplers, scales and equipment for transferring grain to scales on receipt and from scales for shipment are inspected on a scheduled basis. By arrangement with Consumer and Corporate Affairs Canada, scales in those facilities are inspected, verified and certified by the Commission's scale inspectors. During the 1985-86 crop year, the Weighing Division carried out 1 028 inspections of 356 scales.

The Commission encourages the early submission of plans and specifications of new elevator facilities and alterations to grain-handling equipment. During the 1985-86 crop year, the inspection and weighing divisions examined five sets of plans for such projects.

Weighing Services. The Weighing Division supervises the weighing of grain received at and discharged from licensed terminal elevators. The Division monitored the weighing of all export shipments from licensed transfer elevators and randomly monitored the weighing of grain received by licensed transfer elevators.

Weigh-overs. The Weighing Division regularly audits stocks in store in licensed terminal and transfer elevators, to ensure that the quality and quantity of grain has not been altered during handling.

In the Western Division, 15 official grain weighovers were completed and documented at terminal elevators.

In the Eastern Division, a total of 12 official grain weighovers were completed and documented at transfer elevators.

Shortages in Rail Shipments. The Weighing Division investigated reports of unusual or excessive shortages of grain in rail cars received at terminal and transfer elevators.

Shortages in Vessel Shipments. When shortages in excess of 0.1% were indicated in the weights of vessel shipments of grain from Canadian lake and seaboard ports, the Weighing Division investigated loading of the cargoes and reviewed all available information relating to unloading of the grain at destination.

During the period, the Division reviewed six overseas vessel shipments. Outturns on lake vessels from Thunder Bay to transfer elevators in the Eastern Division were investigated in 131 cases where overages or shortages exceeded 0.1% of bill of lading figures. Average net shortages for lake vessel shipments appear in Appendix A-15.

TRANSPORTATION

Producer Cars. Producers loaded a total of 4 479 rail cars during the 1985-86 crop year, compared to 3 067 the previous crop year. Shipments from Manitoba accounted for 49% (2 183 cars), while Alberta and B.C. shipped 26% (1 176 cars) and Saskatchewan 25% (1 120 cars). Shipments of Canadian Wheat Board grains accounted for 42% of the total, or 1 867 cars, an 87% increase from the previous crop year. More than 50% of the shipments originated from 17 train runs, out of a possible 192 train runs. The principal destination of these producer car shipments were: Vancouver: 2 409 cars; Thunder Bay: 2 015 cars; and 55 cars to other destinations.

(B) STANDARDS OF QUALITY

New Grades and Revised Grade Definitions. During the year, grade definitions for barley were revised and were implemented on August 1, 1986. The interim grade of "Sample Account Variety," which was established in 1985 for unlicensed varieties of wheat, was withdrawn August 1, 1986.

Grading Services to Producers. In the Western Division, a producer dissatisfied with the grade, dockage or moisture content assessed upon delivery of grain to a primary elevator may ask that a representative delivery sample be sent to the Commission for official grade and dockage determination*. If the producer is still dissatisfied, the Chief Grain Inspector may be asked to review the sample. Similarly, if the owner believes that the identity of grain specially binned in a primary elevator has not been preserved, the Commission may be called upon to arbitrate. The Inspection Division also inspects other samples forwarded by interested parties, either as a free service or on a fee basis.

Similar services are provided to producers in the Eastern Division, although on a more informal basis. Producers may submit samples for official grading. The Commission's grades on these samples are not binding on the country elevator agents, except in the case of deliveries of wheat, soybeans and white pea beans to agents of the Ontario Wheat Producers Marketing Board, the Ontario Soya Bean Growers Marketing Board, and the Ontario Bean Producers Marketing Board. These organizations have included in their contract with their agents the provision for taking representative samples for official grading by the Commission.

A mobile inspection laboratory provided service to producers in eastern Ontario. It was based in Port Hope for the wheat harvest and later in Prescott for the corn harvest.

During the 1985-86 crop year, 17 291 samples of grain "subject to grade and dockage," and 42 102 other (unofficial) samples were inspected, including 28 444 from western Canada and 13 658 from eastern Canada. The Chief Grain Inspector investigated 10 complaints about special binning and determined that in all cases identity had been preserved at the primary elevator.

Supplementary Inspection Services. The Inspection Division examined and graded 20 329 grain samples, including crop insurance samples and new crop survey samples, as outlined in Appendix A-19.

*Under s. 49(b) of the Canada Grain Act, if a producer and an elevator agent do not agree on the grade of grain, the dockage and/or the moisture content, the producer has the right to have the agent send a sample of the grain to the Canadian Grain Commission for official grading. The agent will then issue an interim elevator receipt for the grain, subject to the grade and dockage and/or the moisture content which will be assigned to the sample by the Commission.

Inspection Services at Terminal, Transfer and Process Elevators. All grain delivered to and shipped from terminal elevators in the Western Division and all Canadian grain shipped from transfer elevators for direct export is sampled and inspected by the Inspection Division. Inspection services are also provided on request for domestic shipments of eastern grains from transfer elevators and at process elevators. All grain in store at terminal and transfer elevators is sampled and inspected at official weighovers of stocks. The services provided by Inspection Division personnel are reviewed in Appendix A.

Grain Appeal Tribunal. The Tribunal examines all appeals of persons dissatisfied with grades assigned as a result of re-inspection by the Chief Grain Inspector. In the 1985-86 crop year, 955 appeals were processed. These pertained to unload grades of carlots and trucklots of grain officially inspected in the Western Division. Grades originally assigned were upheld in 819 cases. The appeals involved shipments of wheat, rapeseed, barley, flaxseed, rye or domestic mustard seed officially inspected in the Western Division.

QUALITY CONTROL

The operational aspects of quality control are carried out by both the Grain Research Laboratory and Inspection divisions.

The Grain Research Laboratory Division provides both quality assurance and market support to the grain industry. Among the important components of the **quality assurance program** are monitoring the inherent quality of grain in carlot and cargo shipments (such as protein level in wheat, oil content in rapeseed), and monitoring for possible presence of pesticide residues and mycotoxins, to ensure shipments are free of any contaminants.

The Laboratory Division also provides technical support for the Inspection Division in: carrying out laboratory tests as required (e.g. varietal identification); the development of new or improved instrumental methods for rapid quality analysis; research on the effect of degrading factors such as frost and sprouting damage on end-use quality; and calibration and monitoring of instruments such as moisture testers used by the Inspection Division.

The Grain Research Laboratory Division also evaluates quality of breeders' lines of cereal grains and oilseeds prior to licensing, and of new varieties which are in commercial production. It conducts studies on the components of grain quality, and on techniques for measuring these components.

Some examples of grain quality programs carried out by the Laboratory Division are research on wheat enzymes, near-infrared reflectance methodology, varietal identification of cereal grains, mycology (moulds and fungi) as it affects stored grain, and grain biology studies.

Market support includes a variety of activities performed in co-operation with such organizations as the Canadian Wheat Board and the Canola Council of Canada. Commission scientists and inspectors travel to customer countries to study the processing technologies currently in use and to determine the suitability of Canadian grains for these markets. They also conduct further studies in the Commission's own facilities.

The following programs carried out by the Laboratory Division contribute both to quality assurance and to market support: harvest surveys, cargo and carlot monitoring, foreign grain studies and research in barley and malt, durum wheat, oilseeds, milling, noodles, soft wheat, and baking. The results from the Laboratory Division's studies are published in an annual report and in a number of periodical bulletins and scientific papers (see Appendix B).

Highlights from 1985:

Moisture Meter Calibration and Monitoring of Performance. The Grain Research Laboratory Division is responsible for the calibration and monitoring of performance of all model 919 moisture meters used in Canadian Grain Commission offices. As these meters do not measure moisture content directly, it is necessary to calibrate them and to develop conversion charts which indicate percentage grain moisture, at a given temperature, from the dial readings of the meters. The Laboratory Division verifies the accuracy of these conversion charts annually, and revised charts are issued whenever necessary to maintain the accuracy of moisture measurements. There are currently 43 different conversion tables in effect for 27 different grains and oilseeds.

Three revised moisture conversion charts were issued August 1, 1985: barley tables #11 and 12, and corn table #7 (20 - 40% range).

Monitoring of Pesticide and Mycotoxin Residues. The Grain Research Laboratory Division monitored export cargo shipments of wheat, barley, oats, rye and rapeseed for organochlorine, organophosphate and organonitrogen pesticide residues. Cargo samples of cereal grains were also tested for residues of the fumigant ethylene dibromide.

The Division expanded its program of monitoring export cargoes for the presence of toxic metabolites of moulds in the 1985-1986 crop year to include more grain types and a larger number of mycotoxins. Cargo shipments of barley, corn and seven classes of wheat were screened for the *Fusarium* spp. trichothecene toxins deoxynivalenol (DON or vomitoxin), diacetoxyscirpenol (DAS), HT-2 toxin and T-2 toxin. In addition, the Division screened cargoes of barley, corn and Canada Feed grade wheat for the presence of ochratoxin "A", and monitored corn and barley cargoes for aflatoxins.

During the course of official inspection and grading, grain suspected of contamination by pesticide compounds or mycotoxins was forwarded to the Grain Research Laboratory Division for analysis.

Assessment of Damage in Farm-dried Wheat. In an effort to minimize the risk of heat damage when Canadian wheat is artificially dried, the Grain Research Laboratory Division continued to offer a service to farmers to assess the quality of wheat dried in heated-air grain dryers. Farmers who submitted samples were provided with the test results, and were advised of the recommended drying temperatures. The Grain Inspection Division offered a similar service to terminal elevator operators. By using proper drying temperatures and procedures, operators can successfully dry high-moisture wheat without damaging its milling and baking quality.

Monitoring of Alpha-amylase Levels in Canadian Wheat. The Grain Research Laboratory Division used the Falling Number test to monitor activity levels of the enzyme alpha-amylase in carlots and cargoes of most classes and grades of wheat grown on the Canadian prairies. Extensive testing was required because the wet harvest conditions of 1985 caused widespread sprout damage which resulted in increased alpha-amylase activity in lower grades. The milling grades of Canada Western Red Spring wheat came through the adverse harvest condition remarkably well due in large part to improved sprout-resistance in newer varieties. The grading system also ensured that sprouted wheat not suitable for milling and baking went into the Canada Feed grade.

The Inspection Division is responsible for other aspects of quality assurance:

Protein Segregation of Red Spring Wheat. During the 1985-86 crop year, 106 515 carlots of No. 1 and No. 2 Canada Western Red Spring wheat (CWRS) were segregated on the basis of protein content at terminal elevators at Thunder Bay, Vancouver and Churchill. Inspection Division personnel determined protein content by the use of near

infrared spectroscopy (NIRS) equipment at Thunder Bay, Vancouver, Prince Rupert and Churchill.

Vessel shipments of No. 1 CWRS and No. 2 CWRS wheat consistently met guaranteed protein levels as measured by the Kjeldahl procedure. Vancouver and Prince Rupert cargo samples were tested for protein content in the Vancouver protein laboratory while No. 1 and 2 CWRS vessel increment samples from other ports were submitted to Winnipeg.

Harvest survey samples of red spring wheat, soft white spring wheat, Alberta red winter wheat, prairie spring wheat, amber durum wheat and barley were tested for protein content in Winnipeg by Automated Digital Analyzer (NIRS).

The Commission continued to assist grain companies in monitoring protein testing equipment by providing check samples and test result analysis.

Entomology Services. The Entomology Section examined 114 224 samples during the last crop year. Low temperatures during the late harvest meant that grain went into storage cool and infestation was therefore reduced. Of the samples examined, 1.5% showed some level of infestation. No licenses were suspended because of infestation.

Rusty grain beetles were the most common insect detected. There was a slight increase in mite infestations due to the higher moisture levels of grain in storage.

Quality of Export Shipments. The Commission followed up inquiries relating to quality and condition of grain shipped to overseas destinations. Commission staff examined official samples taken from the shipments at the time of loading and provided detailed reports of the investigations. During the 1985-86 crop year, the Commission made and successfully concluded investigations of nine cargoes, a figure which represents less than 1% of all cargoes exported.

RESEARCH

Laboratory Research. Research on common and amber durum wheat centered on the following subjects: the effects of pre-break roll surface, release and differential on the milling performance of Canadian wheat of varying hardness; the effects of midge damage, incurred during infestations in 1984 and 1985, on red spring wheat quality; the influence of irrigation practice on the quality of Canada Western Red Spring, Canada Prairie Spring and Canada Western Soft White Spring wheat (the conclusion of a three-year study); assessment of the quality of Canadian wheat flours for the French baking industry; the potential of various Canadian wheats for the Brazilian market; the evaluation of Canada Prairie Spring and Canada Western Red Winter wheat for use in Egypt; the application of polyacrylamide gel electrophoresis for verification of presence or absence of admixtures of unlicensed varieties in carlot deliveries of Canada Western Red Spring wheat; the evaluation of reversed-phase high-performance liquid chromatography for wheat cultivar identification; preliminary studies into the use of two-dimensional electrophoresis for wheat cultivar identification; development of a near-infrared index for indicating wheat hardness; determination of wheat "strength" by the use of near-infrared reflectance spectroscopy (NIRS); the effects of starch damage and water absorption on the alveogram properties of Canadian hard red spring wheat flour; the effect of smooth-roll grinding conditions on reduction of hard red spring wheat semolina; the role of lipids in spaghetti cooking quality; the effect of artificial drying of durum wheat on spaghetti quality; the relationship between durum wheat vitreosity and hardness; the effect of "wheats of other classes" on durum wheat quality; the effect of test weight on durum wheat milling and spaghetti-making quality; the fate of deoxynivalenol during the processing and cooking of spaghetti and noodles.

Barley research topics included: isoelectric focusing properties of beta-amylase enzymes of barley and malt; alpha-glucosidase in barley and malt; the development of a specific assay for limit dextrinase in barley and malt; studies on hordein proteins produced during malting; studies into the frosting of barley growing in the field; ongoing studies on barley and malt alpha-amylases; the production of alpha-amylase in excised barley embryos.

Oilseeds research included the following projects: a study of the effects of environmental factors and agronomic practices on the chlorophyll content of rapeseed; the continuing attempt to establish an objective means of assessing the maturity of oilseed sunflower hybrids; the development of a more rapid technique for the measurement of glucosinolate content in canola and rapeseed; the assessment of the quality of canola and rapeseed which has been overwintered; determining and testing the criteria of quality for confectionary sunflowerseed varieties.

The following are other research studies completed this year: the development of methodology using mass selective detection — capillary gas chromatography for the analysis of pesticide residues in grain; the development of an analytical method for the screening of mycotoxin residues in Canadian grain; screening for *Fusarium* spp. trichothecene toxins in wheat containing "tombstone" kernels; screening for *Fusarium* spp. trichothecene toxins in Ontario corn; studies into the mycoflora associated with the presence of "tombstone" kernels and mildew in wheat and also in canola and rapeseed harvested normally and after overwintering; microscopy studies of midge-damaged wheat kernels, wheat and barley kernels deemed to have suffered "sucking-insect" damage, and rye kernels chewed by insects such as grasshoppers; and studies of a wide range of kernel and seed appearances resulting from a variety of influences in the 1984 and 1985 crops of several different grains.

ACTIVITIES OF ASSISTANT COMMISSIONERS

The Canada Grain Act provides for the appointment of six Assistant Commissioners. The present location of these officers is as follows: one in each of the provinces of Quebec, Ontario, Manitoba and Alberta and two in Saskatchewan. The four western Assistant Commissioners maintain liaison between the Commission and elevator agents and grain producers, and deal with producer enquiries and complaints.

The private elevators in eastern Canada are not required to be licensed by the Canadian Grain Commission because certain sections of the Canada Grain Act pertaining to the Eastern Division have not been proclaimed. Accordingly, the two eastern Assistant Commissioners do not have a direct responsibility in relation to these elevators. Otherwise their duties are similar to those of the western Assistant Commissioners.

During the year under review, the western Assistant Commissioners investigated producers' complaints. They reported elevator overages and any infractions of the Commission's regulations and orders. They spoke at producer meetings and at elevator agent seminars. They met with elevator agents, grain dealers and representatives of elevator companies. They helped staff the Commission's display booth at agricultural exhibitions and took part in seminars on grain drying.

During the 1985-86 crop year, the eastern Assistant Commissioners answered enquiries from producers, shippers, processors, marketing boards, elevator companies and grain dealers' associations. They held discussions with researchers, elevator companies and crop insurance representatives. They represented the Commission on visits to licensed transfer elevators.

SECTION IV

ADMINISTRATION

APPOINTMENTS

G.G. Leith replaced H.D. Pound as Chief Commissioner on March 25, 1986. R.H. Klassen replaced Mr. Leith as Assistant Chief Commissioner on March 25, 1986. R.A. Groundwater replaced Dr. V.E. Candlish as Commissioner on May 1, 1986.

W. Yurko replaced G. Marshall as Alberta Assistant Commissioner and the Assistant Commissioner's office was established in Edmonton rather than Calgary. M.E. Wakefield replaced W.J. McHugh in Saskatoon as Assistant Commissioner. A.N. Watson replaced R.M. Clark as the Ontario Assistant Commissioner, and the location of that office was changed from Harrow to Chatham. All appointments of Assistant Commissioners were made on June 30, 1986.

R.J. Mousseau was appointed Deputy Director of Audits and Scales for the Weighing Division on February 3, 1986.

L. Burch was appointed Head, Information Services on April 28, 1986. S. Steiger was appointed Information Services Officer on September 9, 1985.

PUBLIC RELATIONS

Publications. The publications provided by the Commission are listed in Appendix B.

These publications are available either singly or by subscription.

Meetings and Visits. Representatives of the Commission attended or addressed a wide variety of meetings in Canada and abroad to discuss various aspects of grain handling and grain quality. Attendance at such meetings allows the Commission to keep abreast of new developments and to publicize its activities. Meetings were also held with many of the purchasers of Canadian grain and oilseeds to ensure their continued satisfaction. As well, professional and senior technical staff members represented the Commission at scientific and technical meetings in North America and abroad, and laboratory staff made technical service visits to several overseas countries.

Tours. The Commission receives as visitors individuals, groups, delegations and missions interested in its activities. During the year, about 55 organized tours of the head office facilities were given to over 800 visitors from Canada and other countries. Various Commission staff members took part in technical discussions with the visitors. Commission staff in most of the other 15 centres also welcomed foreign and domestic visitors throughout the year.

Exhibit. The Commission's display unit was in place at 17 fairs and meetings throughout the year. The display is staffed by representatives of the Commission who are available to answer inquiries and provide detailed information on the Commission's policies and programs.

LIBRARY

The Canadian Grain Commission library offers a wide range of information services to the staff of the Commission, people employed in the grain trade and the agricultural community at large. The collection, which dates back to 1912, is strong in the areas of cereal chemistry, milling and baking, grain transportation and grain quality. The staff

works in close cooperation with the Canadian Wheat Board library and other specialized libraries and employs computer data base searching to provide up-to-the-minute information.

FINANCES

Revenues. The Canadian Grain Commission's revenue account is maintained on a cash basis and credited directly to the Government of Canada consolidated revenue account. During the fiscal year ended March 31, 1986, the Commission collected revenue of $32,712,981 for goods and services provided to the grain trade, a decrease of $2,341,263 (6.7%) from the previous year.

The lower revenue of 1985/86 was primarily the result of the lower grain volume handled in the Canadian grain system (– 15.3% compared to 1984/85). The net revenue position was marginally improved by a service fee increase in August 1985.

Expenditures. All Commission expenditures are funded from parliamentary appropriations provided for that purpose and recorded on a cash basis. Fiscal accounts are modified to include costs for services and goods received to March 31, 1986, but unpaid to the close of settlements for the 1985/86 fiscal year.

Operating expenditures also include non-budgetary services from other government departments for which there is no direct charge, such as employee benefits and cheque services. Total Commission expenditures for 1985/86 amounted to $39,046,381, including 796.8 person-years. This represents a minimal cost increase of $668,811 (1.7%), primarily attributed to inflation.

SECTION V

SPECIAL ACTS AND OTHER RESPONSIBILITIES

(A) GRAIN FUTURES ACT

This Act regulates grain futures trading in Canada, and provides for a Supervisor of Futures Trading who reports to the Commissioners.

Order-in-Council P.C. 1976-590 extends the provisions of the Grain Futures Act to Winnipeg Commodity Clearing Ltd., Winnipeg Commodity Exchange, Vancouver Grain Exchange, British Columbia Grain Shippers Clearance Association, Lake Shippers Clearance Association and to their officers and members.

Under the provisions of the Regulations, the Exchanges and clearing houses file lists of their members and copies of their by-laws, rules and regulations with the Commission.

The Supervisor observes the procedures used by grain futures traders, and examines the records and reviews the procedures of clearing houses to ensure that these are in compliance with the Act and Regulations. Periodic visits are made to the Vancouver Grain Exchange for the same purpose. The Supervisor maintains a liaison between the Commission and those organizations, subject to the provisions of the Act and Regulations.

(B) INLAND WATER FREIGHT RATES ACT

Under this authority, the Commission may establish maximum freight rates for the carriage of grain by laker from Thunder Bay to other ports in Eastern Canada. No maximum levels were set by the Commission during the period under review.

Summaries of weighted average lake freight rates are prepared by the Economics and Statistics Division to inform the Commission on current levels.

(C) WESTERN GRAIN STABILIZATION ACT

The Commission may investigate complaints alleging that the eligibility of an applicant for participation in the Western Grain Stabilization Program has not been properly recognized. Producers declared ineligible by the Minister responsible may appeal the decision to the Commission pursuant to subsection 7(2). By virtue of subsection 28(1), the Commission may rule on the applicant's eligibility. No such appeals were made during the reporting period. Pursuant to subsection 30(2), the Commission makes orders assessing a penalty of two per cent per month against licensees who have failed to pay levies owed to the W.G.S.A. Two such orders were made during the reporting period.

The Commission continues to provide computer services to the Western Grain Stabilization Administration, including the collection of producer delivery data and levies, and the preparation of reports for participants.

(D) CANADIAN INTERNATIONAL GRAINS INSTITUTE

Messrs. G.G. Leith and W.J. O'Connor served as Directors and Mr. Leith served as Chairman of the Institute's Board of Directors. The Commission continued to support the Institute in its efforts to provide market development assistance for Canada's grain and oilseed industry. Commissioners and officers of the Commission again served as lecturers and resource persons for the courses offered by the Institute. As well, a number of Commission employees were participants in several of these courses.

APPENDIX A

GRAIN STATISTICS AND QUALITY

A-1 SUPPLY AND DISPOSITION OF CANADIAN GRAINS
Crop Year 1985-86[1] (thousands of tonnes)

	Wheat (Excl. Durum)		Durum Wheat		Barley		Corn		Rapeseed		Oats		Soybeans		Flaxseed		Rye		Total	
SUPPLY	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**	**85/86**	**84/85**
Carry-over July 31, 1985[2]	7 074	(8 426)	524	(764)	2 156	(1 971)	1 431	(1 005)	470	(120)	619	(695)	217	(132)	144	(155)	383	(431)	13 018	(13 699)
Production in 1985	22 295	(19 114)	1 957	(2 085)	12 443	(10 296)	7 472	(7 023)	3 508	(3 382)	2 997	(2 670)	1 048	(944)	902	(694)	598	(664)	53 220	(46 872)
Total supply	**29 369**	**(27 540)**	**2 481**	**(2 849)**	**14 559**	**(12 267)**	**8 903**	**(8 028)**	**3 978**	**(3 502)**	**3 616**	**(3 365)**	**1 265**	**(1 076)**	**1 046**	**(849)**	**981**	**(1 095)**	**66 238**	**(60 571)**
DISPOSITION																				
Exports[3]	16 305	(15 757)	1 385	(1 826)	3 794	(2 781)	490	(555)	1 456	(1 456)	43	(18)	173	(123)	586	(517)	234	(359)	24 466	(23 392)
Domestic use	5 180	(4 709)	532	(499)	7 574	(7 330)	6 551	(6 042)	1 541	(1 576)	2 759	(2 728)	950	(736)	155	(188)	431	(353)	25 673	(24 161)
Total disposition	**21 485**	**(20 466)**	**1 917**	**(2 325)**	**11 368**	**(10 111)**	**7 041**	**(6 597)**	**2 997**	**(3 032)**	**2 802**	**(2 746)**	**1 123**	**(859)**	**741**	**(705)**	**665**	**(712)**	**50 139**	**(47 553)**
CARRY-OVER (July 31, 1986)																				
On farms	700	(940)	70	(140)	1 095	(865)	1 410	(1 040)	270	(95)	635	(495)	20	(20)	75	(25)	160	(150)	4 435	(3 770)
In primary, process and terminal elevators	4 898	(3 333)	433	(184)	1 569	(876)	1	(—)	688	(344)	157	(88)	—	(—)	222	(114)	149	(222)	8 117	(5 161)
In store and in transit to eastern transfer elevators	1 820	(2 376)	43	(156)	293	(15)	84	(17)	2	(4)	13	(15)	2	(11)	1	(—)	1	(6)	2 259	(2 626)
In eastern and western mills	94	(101)	8	(6)	—	(—)	351	(374)	—	(—)	—	(—)	120	(186)	—	(—)	—	(—)	573	(667)
In transit rail, eastern and western divisions	372	(324)	10	(38)	274	(374)	16	(—)	21	(27)	9	(21)	—	(—)	7	(5)	6	(5)	715	(794)
Total in store July 31, 1986	**7 884**	**(7 074)**	**564**	**(524)**	**3 231**	**(2 156)**	**1 862**	**(1 431)**	**981**	**(470)**	**814**	**(619)**	**142**	**(217)**	**305**	**(144)**	**316**	**(383)**	**16 099**	**(13 018)**

[1]Subject to revision
[2]Revised
[3]Includes exports of bulk grain, seed and (except for flaxseed and rapeseed) milled and processed products expressed in grain equivalents

A-2 LICENCES IN FORCE AND STORAGE CAPACITY
August 1, 1984 and 1985

Type of Licence	No. of Licences		Capacities in Tonnes	
	1985	1984	1985	1984
Primary	1 940	1 967	7 894 740	8 005 720
Process	29	32	508 070	543 770
Terminal	21	21	3 663 550	3 517 050
Transfer	25	25	3 436 730	3 466 390
Grain dealers	61	62	—	—
TOTAL	**2 076**	**2 107**	**15 503 090**	**15 532 930**

A-3 TOTAL NET TERMINAL ELEVATOR RECEIPTS
Crop Year 1985-86

	Net Tonnes	Percentage of Class	Percentage of Total Receipts
WHEAT			
No. 1 Canada Western Red Spring	3 995 964	25.1	15.9
Tough No. 1 Canada Western Red Spring	322 277	2.0	1.3
No. 2 Canada Western Red Spring	2 650 558	16.7	10.5
Tough No. 2 Canada Western Red Spring	1 233 138	7.8	4.9
No. 3 Canada Western Red Spring	3 762 284	23.7	15.0
Tough No. 3 Canada Western Red Spring	1 283 243	8.1	5.1
Canada Prairie Spring	295 816	1.8	1.2
No. 1 Canada Utility	126 953	0.8	0.5
No. 2 Canada Utility	21 954	0.1	0.1
Canada Feed	1 224 336	7.7	4.8
Other Tough	660 754	4.2	2.6
Damp	196 491	1.2	0.8
Rejected	4 193	*	*
Other red spring	123 805	0.8	0.5
Total red spring wheat	**15 901 766**	**100.0**	**63.2**
Total soft white spring wheat	**263 883**	**100.0**	**1.0**
Total red winter wheat	**317 938**	**100.0**	**1.3**
DURUM			
No. 1 Canada Western Amber Durum	456 995	31.2	1.8
Tough No. 1 Canada Western Amber Durum	19 111	1.3	0.1
No. 2 Canada Western Amber Durum	297 178	20.3	1.2
Tough No. 2 Canada Western Amber Durum	64 049	4.4	0.3
No. 3 Canada Western Amber Durum	277 780	19.0	1.1
Tough No. 3 Canada Western Amber Durum	133 374	9.1	0.5
No. 4 Canada Western Amber Durum	102 733	7.0	0.4
Tough No. 4 Canada Western Amber Durum	72 647	5.0	0.3
No. 5 Canada Western Amber Durum	13 572	0 9	0.1
Tough No. 5 Canada Western Amber Durum	13 018	0.9	*
Others	13 821	0.9	0.1
Total durum	**1 464 278**	**100.0**	**5.9**
TOTAL ALL WHEATS	**17 947 865**	**100.0**	**71.4**

*less than 0.1%

A-3 TOTAL NET TERMINAL ELEVATOR RECEIPTS
Crop Year 1985-86 (Continued)

	Net Tonnes	Percentage of Class	Percentage of Total Receipts
BARLEY			
No. 1 Canada Western Six-Row	—	—	—
Tough No. 1 Canada Western Six-Row	82	*	*
No. 2 Canada Western Six-Row	9 031	0.2	*
Tough No. 2 Canada Western Six-Row	1 637	*	*
No. 1 Canada Western Two-Row	1 397	*	*
Tough No. 1 Canada Western Two-Row	230	*	*
No. 2 Canada Western Two-Row	10 351	0.2	0.1
Tough No. 2 Canada Western Two-Row	3 546	0.1	*
No. 1 Canada Feed	3 224 145	73.7	12.8
Tough No. 1 Canada Feed	737 487	16.9	2.9
No. 2 Canada Feed	146 225	3.3	0.6
Tough No. 2 Canada Feed	43 787	1.0	0.2
No. 3 Canada Feed	13 236	0.3	0.1
Tough No. 3 Canada Feed	3 123	0.1	*
Other Tough	1 791	*	*
Damp	53 954	1.2	0.2
Rejected	111	*	*
Others	123 803	2.8	0.5
TOTAL BARLEY	**4 373 936**	**100.0**	**17.4**
RAPESEED			
No. 1 Canada	1 316 697	75.4	5.2
Tough No. 1 Canada	28 733	1.6	0.1
No. 2 Canada	250 835	14.4	1.0
Tough No. 2 Canada	12 417	0.7	*
No. 3 Canada	39 770	2.3	0.2
Tough No. 3 Canada	4 052	0.2	*
Other Tough	9 416	0.5	*
Damp	25 323	1.5	0.1
Rejected	—	—	—
Others	58 577	3.4	0.2
TOTAL RAPESEED	**1 745 820**	**100.0**	**6.9**
OATS			
No. 1 Canada Western	—	—	—
Tough No. 1 Canada Western	—	—	—
No. 2 Canada Western	3 419	3.2	*
Tough No. 2 Canada Western	258	0.2	*
Extra No. 1 Canada Feed	10 229	9.7	*
Tough Extra No. 1 Canada Feed	2 293	2.2	*
No. 1 Canada Feed	66 382	63.1	0.3
Tough No. 1 Canada Feed	13 546	12.9	0.1
No. 2 Canada Feed	5 503	5.2	*
Tough No. 2 Canada Feed	1 040	1.0	*
No. 3 Canada Feed	1 312	1.3	*
Tough No. 3 Canada Feed	255	0.2	*
Damp	300	0.3	*
Rejected	—	—	—
Others	697	0.7	*
TOTAL OATS	**105 234**	**100.0**	**0.4**

*less than 0.1%

A-3 TOTAL NET TERMINAL ELEVATOR RECEIPTS
Crop Year 1985-86 (Concluded)

	Net Tonnes	Percentage of Class	Percentage of Total Receipts
FLAXSEED			
No. 1 Canada	540 709	86.9	2.2
Tough No. 1 Canada	65 139	10.5	0.3
No. 2 Canada	5 846	0.9	*
Tough No. 2 Canada	565	0.1	*
No. 3 Canada	2 537	0.4	*
Tough No. 3 Canada	876	0.1	*
Other Tough	419	0.1	*
Damp	5 109	0.8	*
Rejected	—	—	—
Others	1 269	0.2	*
TOTAL FLAXSEED	**622 469**	**100.0**	**2.5**
RYE			
No. 1 Canada	162 636	74.7	0.6
Tough No. 1 Canada	2 023	0.9	*
No. 2 Canada	38 199	17.6	0.2
Tough No. 2 Canada	2 383	1.1	*
No. 3 Canada	8 799	4.0	*
Tough No. 3 Canada	1 429	0.7	*
Canada Ergoty	148	0.1	*
Other Tough	430	0.2	*
Rejected	7	*	*
Others	1 598	0.7	*
TOTAL RYE	**217 652**	**100.0**	**0.9**
OTHER GRAINS AND PRODUCTS			
Sunflower	616	0.5	*
Mixed grain	435	0.4	*
Screenings	26 006	20.2	0.1
Buckwheat	165	0.1	*
Peas	10 067	7.9	0.1
Safflower	46	*	*
Canary seed	10 781	8.4	*
Mustard seed	36 519	28.4	0.1
Triticale	40	*	*
U.S. safflower	239	0.2	*
U.S. mustard	41	*	*
Lentils	479	0.4	*
Faba beans	1 405	1.1	*
Manufactured products	812	0.6	*
Pelleted screenings	40 746	31.8	0.2
U.S. corn	24	*	*
U.S. rapeseed	68	*	*
TOTAL	**128 489**	**100.0**	**0.5**
TOTAL RECEIPTS	**25 141 465**	**100.0**	**100.0**

*Less than 0.1%

A-4 SAMPLES OF GRAIN INSPECTED "SUBJECT TO GRADE AND DOCKAGE" Crop Year 1985-86

Point	Number of Samples
Chatham	5 554
Montréal	—
Winnipeg	9 746
Calgary	1 557
Moose Jaw	102
Saskatoon	142
Lethbridge	190
Vancouver	—
TOTAL	**17 291**

A-5 OTHER UNOFFICIAL SAMPLES OF GRAIN INSPECTED Crop Year 1985-86

Point	Number of Samples
Chatham	11 727
Montréal	1 931
Winnipeg	11 065
Calgary	6 453
Moose Jaw	889
Saskatoon	2 399
Lethbridge	5 382
Vancouver	2 256
TOTAL	**42 102**

A-6 INWARD CARLOT AND TRUCKLOT RE-INSPECTIONS OF WESTERN GRAIN Crop Year 1985-86

Point	Inspected	Re-inspected	Un-changed	Grades Raised	Grades Lowered	Dockage Raised	Dockage Lowered
Thunder Bay	161 861	11 928	10 412	1 460	29	1	26
Winnipeg	2 392	569	539	28	1	—	1
Churchill	8 473	103	95	5	2	—	1
Moose Jaw	5 725	328	192	135	1	—	—
Saskatoon[1]	5 364	341	258	54	5	2	9
Calgary	1 694	35	34	1	—	—	—
Prince Rupert	19 422	454	414	40	—	—	—
Vancouver	141 891	7 470	6 809	590	8	8	55
TOTAL	**346 822**	**21 228**	**18 753**	**2 313**	**46**	**11**	**92**
Percentage of total carlots and trucklots	**100.0**	**6.1**	**99.3**	**0.7**	*	*	*
Percentage of reinspections	—	**100.0**	**88.4**	**10.9**	**0.2**	**0.1**	**0.4**

[1]In the case of 10 samples re-inspected at Saskatoon, **both** grade and dockage were raised. In three cases both grade and dockage were lowered. In all other cases, **either** grade **or** dockage was changed, but not both.

*Less than 0.05%.

A-7 OUTWARD CARLOT AND TRUCKLOT INSPECTIONS OF WESTERN GRAIN AT TERMINAL AND PROCESS ELEVATORS
Crop Year 1985-86

Location	Carlots	Trucklots	Total
		– number of samples –	
Winnipeg	157	—	157
Thunder Bay	13 304	445	13 749
Calgary	44	1	45
Lethbridge	—	—	—
Saskatoon	409	608	1 017
Moose Jaw	826	503	1 329
Vancouver & Prince Rupert	43	2 282	2 325
Churchill	144	—	144
TOTAL	**14 927**	**3 839**	**18 766**

A-8 CARLOT INSPECTIONS OF EASTERN GRAIN
Crop Year 1985-86

Grain	Montréal		Chatham		Total	
	tonnes	samples	tonnes	samples	tonnes	samples
Corn	—		7 148.550	127	7 148.550	127
Beans	—		45.216	3	45.216	3
Soybeans	—		72.530	4	72.530	4
Lentils	—		21.546	2	21.546	2
TOTAL	**—**		**7 287.842**	**136**	**7 287.842**	**136**

A-9.1 INSPECTION OF EASTERN GRAIN IN CARGOES, BINS, TRUCKS OR WAREHOUSES
Crop Year 1985-86

Grain	Montréal		Chatham		Total	
	tonnes	samples	tonnes	samples	tonnes	samples
Wheat	25 877.600	7	848 757.914	44	874 635.514	51
Barley	—	—	1 124.727	1	1 124.727	1
Oats	—	—	—	—	—	—
Corn	1 780.000	2	580 866.913	47	582 646.913	49
Soybeans	—	—	75 963.254	9	75 963.254	9
Beans	—	—	616.857	27	616.857	27
Cranberry beans	—	—	72.576	4	72.576	4
Peas	—	—	—	—	—	—
Lentils	—	—	—	—	—	—
Domestic mustard seed	—	—	—	—	—	—
TOTAL	**27 657.000**	**9**	**1 507 402.241**	**132**	**1 535 059.841**	**141**

A-9.2 INSPECTION OF WESTERN GRAIN IN CARGOES, BINS, TRUCKS OR WAREHOUSES (MONTRÉAL)
Crop Year 1985-86

Grain	Tonnes	Samples
Wheat	5 019.000	5
Barley	5 152.050	2
Oats	—	—
Corn	—	—
Soybeans	—	—
Sunflower seed	—	—
Peas	4 784.318	99
Lentils	4 458.730	213
Domestic mustard seed	—	—
TOTAL	**19 414.098**	**319**

A-10 TERMINAL ELEVATOR HANDLINGS
Crop Year 1985-86 (tonnes)

RECEIPTS	Wheat	Durum	Barley	Rapeseed	Oats	Flaxseed	Rye	Miscellaneous[1]
Thunder Bay	8 277 153	1 311 552	1 860 475	156 815	100 775	357 225	3 760	21 280
Vancouver	6 819 903	151 361	1 964 628	1 424 662	2 796	223 028	195 087	4 154
Prince Rupert	1 133 798	—	326 301	—	—	—	17 646	—
Churchill	222 787	—	219 241	—	—	—	—	—
Interiors	29 946	1 366	3 291	164 343	1 663	42 216	1 159	35 120
TOTAL	**16 483 587**	**1 464 279**	**4 373 936**	**1 745 820**	**105 234**	**622 469**	**217 652**	**60 554**
SHIPMENTS								
Thunder Bay	8 437 615	1 284 458	1 799 381	152 050	92 177	323 431	17 159	21 132
Vancouver	6 799 292	165 068	1 967 344	1 417 472	2 695	220 138	191 875	4 048
Prince Rupert	1 098 881	—	281 994	2 269	—	—	17 616	—
Churchill	236 033	—	155 635	—	—	—	—	—
Interiors	5 007	258	9 643	63 577	3 125	23 343	1 463	32 165
TOTAL	**16 576 828**	**1 449 784**	**4 213 997**	**1 635 368**	**97 997**	**566 912**	**228 113**	**57 345**

[1] "Miscellaneous" excludes screenings, pelleted screenings, barley malt and manufactured products.

A-11 MAXIMUM TARIFFS
Crop Year 1985-86

	– dollars per tonne –					
Primary Elevators	**Wheat**	**Barley**	**Rapeseed**	**Oats**	**Flaxseed**	**Rye**
Elevation[1]	8.53	10.58	13.65	13.99	13.42	8.96
Storage	0.026	0.032	0.031	0.043	0.031	0.027
Terminal Elevators						
Elevation[2]	5.01	6.21	8.02	8.22	7.88	5.26
Storage (per day)[2]	0.035	0.043	0.042	0.057	0.041	0.037
Cleaning for removal of dockage[3]	2.63	3.26	4.21	4.31	4.14	2.76

[1]Elevation and storage charges are computed on net weight of the grain.
[2]Elevation and storage charges (terminal elevators) are computed on the net weight of the grain.
[3]Cleaning charges are computed on the accountable gross weight of grain.

A-11 MAXIMUM TARIFFS
Crop Year 1985-86 (Concluded)

Transfer Elevators	Wheat	Barley	Rapeseed	Oats	Flaxseed	Rye
	– dollars per tonne –					
Elevation[1]						
From vessels:						
— to vessels	3.81	4.72	6.10	6.25	5.99	4.00
— to railway cars	4.82	5.98	7.71	7.90	7.58	5.06
— to trucks	5.45	6.76	8.72	8.94	8.57	5.72
From railway cars:						
— to vessels	4.82	5.98	7.71	7.90	7.58	5.06
— to railway cars	5.82	7.22	9.31	9.54	9.16	6.11
— to trucks	6.45	8.00	10.32	10.58	10.15	6.77
From trucks:						
— to vessels	5.45	6.76	8.72	8.94	8.57	5.72
— to railway cars	6.45	8.00	10.32	10.58	10.15	6.77
— to trucks	7.08	8.78	11.33	11.61	11.14	7.43
Storage (per day)[2]	0.035	0.043	0.042	0.057	0.041	0.037

[1]Elevation charges (transfer elevators) are computed on the weight of grain as received into the elevator.
[2]Storage charges are computed on the weight of grain after drying.

A-12 INWARD AND EXPORT CARGOES SAMPLED AND INSPECTED: EASTERN DIVISION
Crop Year 1985-86 (tonnes)

Point	Eastern Grain Inward	Eastern Grain Export	Western Grain Inward	Western Grain Export	TOTAL
Montréal	—	6 364.657	—	1 567 006.484	1 573 371.141
Sorel	—	115 439.402	—	550 171.907	665 611.309
Trois-Rivières	—	104 885.000	—	421 244.345	526 129.345
Québec	—	—	—	2 473 672.497	2 473 672.497
Baie-Comeau	—	—	—	2 193 637.334	2 193 637.334
Port-Cartier	—	45 465.615	—	1 617 312.135	1 662 777.750
Saint John	—	123 475.259	—	203 523.561	326 998.820
Prescott	25 596.235	—	—	—	25 596.235
Kingston	—	—	—	—	—
Sarnia	—	112 158.680	—	—	112 158.680
Windsor	—	50 007.998	—	—	50 007.998
Port Colborne	—	—	—	—	—
Goderich	—	48 546.065	—	—	48 546.065
Halifax	22 451.847	—	—	286 107.372	308 559.219
TOTAL	**48 048.082**	**606 342.676**	**—**	**9 312 675.635**	**9 967 066.393**

A-13 OFFICIAL WEIGHINGS
Crop Year 1985-86

	Lake Vessels Loaded	Ocean Vessels Loaded	Vessels Unloaded	Railcars Unloaded	Railcars Loaded	Trucks Unloaded	Trucks Loaded	Total
Pacific Region	—	480	—	161 381	64	—	2 282	164 206
Prairie Region	—	13	—	8 472	1 782	12 000	1 751	24 018
Thunder Bay Region	513	44	—	143 288	12 490	275	162	156 772
Eastern Region	—	443	71	9 646	—	—	—	10 160
TOTAL	**513**	**979**	**71**	**322 787**	**14 336**	**12 275**	**4 195**	**355 156**

A-14 CARLOTS WEIGHED AND EXCEPTION REPORTS ISSUED: WESTERN DIVISION
Crop Years 1985-86 and 1984-85

	1985-86	1984-85
Cars weighed in	313 141	353 075
Cars weighed out	14 336	8 305
Exception reports issued[1]	2 688	3 893

[1]Represents leaks and missing or defective seals.

A-15 AVERAGE REPORTED OUTTURN NET SHORTAGE ON VESSEL SHIPMENTS OF GRAIN FROM THUNDER BAY TO LICENSED TRANSFER ELEVATORS
Crop Year 1985-86

Commodity	Tonnes Shipped	Shortage Per Cent	
		1985-86	1984-85
Wheat	7 480 446	0.05	0.05
Durum	1 127 572	0.03	0.05
Oats	39 662	0.12	0.08
Barley	1 430 523	0.02	0.05
Rye	1 600	0.27	0.08
Flaxseed	8 819	0.27	0.42
Rapeseed	37 173	0.21	0.18
Screenings	37 043	0.09	0.08

A-16 TOUGH AND DAMP GRAIN DRIED AT TERMINAL ELEVATORS
Crop Year 1985-86 (tonnes)

	Tough	Damp	Tough & Damp	Natural Drying	Total
		— heated-air drying —			
PACIFIC COAST					
Wheat	971 652	21 457	993 109	209 862	1 202 971
Durum	10 900	67	10 967	9 574	20 541
Oats	—	—	—	263	263
Barley	355 968	28 131	384 099	22 993	407 092
Rye	—	—	—	3 633	3 633
Flaxseed	—	—	—	10 732	10 732
Rapeseed	—	63	63	7 961	8 024
TOTAL	**1 338 520**	**49 718**	**1 388 238**	**265 018**	**1 653 256**
THUNDER BAY					
Wheat	1 905 381	167 966	2 073 347	168 872	2 242 219
Durum	229 037	11 630	240 667	21 213	261 880
Oats	10 391	300	10 691	2 746	13 437
Barley	256 017	23 851	279 868	74 424	354 292
Rye	—	—	—	—	—
Flaxseed	16 936	397	17 333	18 822	36 155
Rapeseed	—	—	—	1 636	1 636
TOTAL	**2 417 762**	**204 144**	**2 621 906**	**287 713**	**2 909 619**
INTERIOR TERMINALS					
Wheat	6 195	3 159	9 354	393	9 747
Durum	132	288	420	206	626
Oats	—	—	—	—	—
Barley	304	217	521	38	559
Rye	24	—	24	23	47
Flaxseed	7 226	4 363	11 589	5 949	17 538
Rapeseed	28 103	24 949	53 052	7 154	60 206
Mustard seed	340	1 904	2 244	729	2 973
TOTAL	**42 324**	**34 880**	**77 204**	**14 492**	**91 696**
CHURCHILL					
Wheat	—	—	—	606	606
TOTAL — ALL POSITIONS	**3 798 606**	**288 742**	**4 087 348**	**567 829**	**4 655 177**

A-17 OFFICIAL INSPECTIONS APPEALED
Crop Year 1985-86

	Inspections	Percentage
Left as graded	819	85.8%
Grades raised	133	13.9%
Grades lowered	3	0.3%
TOTAL	**955**	**100.0%**

A-18 PRODUCER CAR SHIPMENTS BY PROVINCE BY GRAIN
Crop Year 1985-86

Grain		Manitoba	Saskatchewan	Alberta and B.C.	Total	% of Total Cars
Wheat	CWB[1]	643	267	144	1 054	23.5
	NBF[2]	140	7	5	152	3.4
Durum	CWB[1]	163	9	0	172	3.8
Oats	CWB[1]	9	0	3	12	0.3
	NBF[2]	6	1	0	7	0.2
Barley	CWB[1]	308	171	150	629	14.0
	NBF[2]	80	46	25	151	3.4
Rye		39	2	1	42	0.9
Flaxseed		366	172	8	546	12.2
Rapeseed		429	445	840	1 714	38.3
TOTAL		**2 183**	**1 120**	**1 176**	**4 479**	**100.0**
% of total		**48.7**	**25.0**	**26.3**	**100.0**	
1985-86 (%)		**51.7**	**18.4**	**29.9**	**100.0**	

[1]Canadian Wheat Board
[2]Non-board feed

A-19 INSPECTIONS OF SUPPLEMENTARY PROGRAM SAMPLES
Crop Year 1985-86

Location	Crop Insurance	C.W.B. Contract	New Crop Survey
	— number of samples —		
Winnipeg	4 570	—	14 939
Calgary	27	—	—
Lethbridge	793	—	—
TOTAL	**5 390**	**—**	**14 939**

APPENDIX B

LIST OF PUBLICATIONS AVAILABLE IN 1986

Title	Issued
Harvest Surveys:	
Quality of Canadian Soybean Crop	Annually
Quality of Canadian Wheat	Annually
Western Canadian Oilseeds, Crop Bulletin	Annually
Export Shipments:	
Canadian Grain Exports	Annually
Exports of Canadian Grain and Wheat Flour	Monthly
Quality of Canadian Grain Exports:	
Red Spring Wheat	Quarterly
Amber Durum Wheat	Semi-Annually
Rapeseed and Flaxseed Cargoes	Annually
Others:	
Annual Report, Canadian Grain Commission	Annually
Annual Report, Grain Research Laboratory	Annually
Canada Grain Regulations	
Canadian Grain Commission (brochure)	
Canadian Protein Segregation System	
Farm Drying of Milling Wheat	
Grain Deliveries at Prairie Points	Annually
Grain Elevators in Canada	Annually
Grain Grading Handbook:	
Eastern Canada	Annually
Western Canada	Annually
Grain Research Laboratory (brochure)	
Grain Statistics Weekly	Weekly
Map of western Canada showing protein content of all grades of red spring wheat	Annually
Official Canadian Grain Grading Guide	
Producer Car Information Pamphlet	Annually
Services to Producers of Grains and Oilseeds	
Specifications for Official Grades of Canadian Grain	
Stored Grain Pests	
Summary of Licensing Requirements	
The Grain Producer, the Primary Elevator and the Canadian Grain Commission	
Visible Grain Supplies and Disposition	Annually
Wheat Grading in Western Canada (1883-1983)	
Grain Research Laboratory:	
Periodical publications and research reports	

Note: A complete publications list is available on request. Some publications are available at no charge.

APPENDIX C

REVENUE AND EXPENDITURES

C-1 STATEMENT OF REVENUE AND EXPENDITURES
Fiscal year ended March 31, 1986 $(000)

TYPE	Administration	Grain Inspection	Grain Weighing	Economics & Statistics	Grain Testing & Research	Total Current Year	Total Previous Year
Revenue (Appendix C2)	24	19 355	10 540	2 792	2	32 713	35 054
Expenditures: (Appendix C3)							
Operating & maintenance	2 390	16 467	8 217	3 787	5 391	36 252	37 375
Capital	74	941	37	1 235	504	2 791	894
Contributions	—	—	—	—	3	3	108
Total Expenditures	**2 464**	**17 408**	**8 254**	**5 022**	**5 898**	**39 046**	**38 377**
Cost of Operations (Deficit)	**(2 440)**	**1 947**	**2 286**	**(2 230)**	**(5 896)**	**(6 333)**	**(3 323)**

C-2 REVENUE — By Type and Division
Fiscal year ended March 31, 1986 $(000)

TYPE	Administration	Grain Inspection	Grain Weighing	Economics & Statistics	Grain Testing & Research	Total Current Year	Total Previous Year
Service fees:							
Inspection	—	19 308	—	—	—	19 308	20 421
Weighing	—	—	10 533	—	—	10 533	11 341
Documentation	—	—	—	2 639	—	2 639	3 022
Other	6	—	—	—	1	7	18
Proceeds from sales:							
Grain samples	—	38	—	—	—	38	45
Publications	—	1	—	25	—	26	—
Licences	—	—	—	120	—	120	84
Other	18	8	7	8	1	42	123
Total Current Year	**24**	**19 355**	**10 540**	**2 792**	**2**	**32 713**	
Total Previous Year	**45**	**20 495**	**11 407**	**3 106**	**1**		**35 054**

C-3 EXPENDITURES — By Type and Division
Fiscal year ended March 31, 1986 $(000)

TYPE	Administration	Grain Inspection	Grain Weighing	Economics & Statistics	Grain Testing & Research	Total Current Year	Total Previous Year
Operating & maintenance:							
Salary & wages	1 579	11 959	6 039	2 353	3 191	25 121	26 885
Employee benefit costs[1]	229	2 769	1 497	508	624	5 627	5 378
Travel & relocation	90	529	514	67	114	1 314	1 122
Postage, freight, cartage	82	204	4	13	40	343	312
Communication	106	76	32	76	31	321	351
Advertising	1	—	—	5	—	6	8
Publications issued	37	33	1	57	34	162	169
Prof. & special services	29	58	14	65	85	251	183
Accounting serv. costs[1]	1	8	4	3	3	19	27
Rentals:							
Building	170	615	81	326	865	2 057	1 970
Equipment and computer	10	28	7	132	5	182	145
Purchase repair service:							
Building	1	3	—	1	4	9	29
Equipment and computer	5	15	11	128	59	218	221
Printing & stationery	44	46	7	40	56	193	142
Materials & supplies	6	121	6	13	280	426	426
Expenditures — other	—	3	—	—	—	3	7
Total Operating & Maint.	**2 390**	**16 467**	**8 217**	**3 787**	**5 391**	**36 252**	**37 375**
Capital:							
Building renovations	—	120	5	45	7	177	—
Equipment:							
Scientific & technical	—	561	—	—	308	869	375
Office	56	9	21	20	16	122	61
Computers	4	100	11	1 168	23	1 306	205
Other equipment	14	151	—	2	150	317	253
Total Capital	**74**	**941**	**37**	**1 235**	**504**	**2 791**	**894**
Contributions:							
Membership					3	3	4
Automated scale installation							104
Total Contributions					**3**	**3**	**108**
Total Current Year	**2 464**	**17 408**	**8 254**	**5 022**	**5 898**	**39 046**	
Total Previous Year	**2 273**	**17 812**	**9 036**	**3 834**	**5 422**		**38 377**

[1]Includes costs of a direct payment and service provided without charge by other government departments.

C-4 EXPENDITURES — By Location and Division
Fiscal year ended March 31, 1986 $(000)

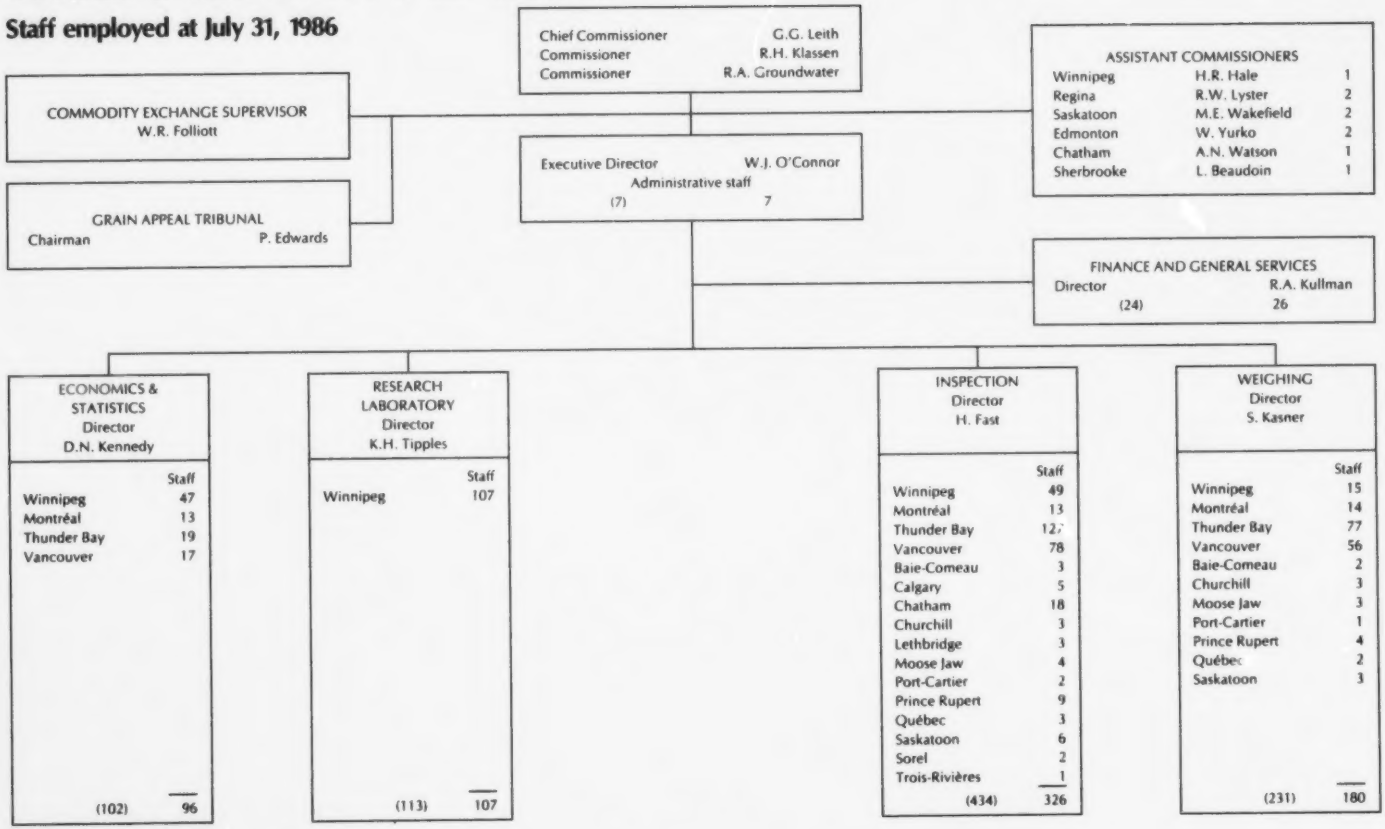
LOCATION	Administration	Grain Inspection	Grain Weighing	Economics & Statistics	Grain Testing & Research	Total Current Year	Total Previous Year
Vancouver	—	4 133	2 442	886	—	7 461	6 653
Prince Rupert	—	353	199	—	—	552	691
Lethbridge	—	195	—	—	—	195	194
Calgary	86	238	—	—	—	324	433
Edmonton	—	—	—	—	—	—	89
Saskatoon	87	287	100	—	—	474	453
Moose Jaw	—	255	122	—	—	377	266
Regina	92	—	—	—	—	92	69
Churchill	—	45	98	—	—	143	147
Winnipeg	2 086	2 804	903	2 809	5 898	14 500	13 472
Thunder Bay	—	6 666	3 263	904	—	10 833	11 622
Toronto	—	—	—	—	—	—	83
Chatham	—	994	—	—	—	994	957
Harrow	56	—	—	—	—	56	55
Montréal	—	853	1 090	423	—	2 366	2 517
Baie-Comeau	—	156	1	—	—	157	129
Sorel	—	60	—	—	—	60	91
Port-Cartier	—	153	—	—	—	153	164
Québec	—	177	10	—	—	187	197
Sherbrooke	57	—	—	—	—	57	55
Trois-Rivières	—	39	3	—	—	42	40
Saint John	—	—	9	—	—	9	—
Halifax	—	—	14	—	—	14	—
Total Current Year	**2 464**	**17 408**	**8 254**	**5 022**	**5 898**	**39 046**	
Total Previous Year	**2 273**	**17 812**	**9 036**	**3 834**	**5 422**		**38 377**

C-5 REVENUE — By Location and Division
Fiscal year ended March 31, 1986 $(000)

LOCATION	Administration	Grain Inspection	Grain Weighing	Economics & Statistics	Grain Testing & Research	Total Current Year	Total Previous Year
Vancouver	—	5 961	3 398	1 124	—	10 483	11 952
Prince Rupert	—	694	395	—	—	1 089	1 299
Lethbridge	—	55	—	—	—	55	61
Calgary	—	108	—	—	—	108	145
Edmonton	—	—	—	—	—	—	26
Saskatoon	—	130	43	—	—	173	143
Moose Jaw	—	130	54	—	—	184	97
Churchill	—	260	153	—	—	413	468
Winnipeg	24	262	2	1 546	2	1 836	2 130
Thunder Bay	—	8 185	4 547	17	—	12 749	17 384
Toronto	—	—	—	—	—	—	2
Chatham	—	691	—	—	—	691	622
Montréal	—	684	444	105	—	1 233	641
Baie-Comeau	—	652	438	—	—	1 090	22
Sorel	—	200	115	—	—	315	5
Port-Cartier	—	572	367	—	—	939	20
Québec	—	605	371	—	—	976	30
Trois-Rivières	—	166	102	—	—	268	7
Saint John	—	—	74	—	—	74	—
Halifax	—	—	37	—	—	37	—
Total Current Year	**24**	**19 355**	**10 540**	**2 792**	**2**	**32 713**	
Total Previous Year	**45**	**20 495**	**11 407**	**3 106**	**1**		**35 054**

APPENDIX D
ORGANIZATIONAL CHART

Staff employed at July 31, 1986



Includes full-time and casual, seasonal and part-time staff.
Figures in parentheses represent authorized person-years.